

WHAT IS CLAIMED IS:

1. A user interface control apparatus for avoiding a conflict that occurs between setup data for a predetermined object to be controlled, which are input
5 via a user interface, comprising:

storage means for storing conflict process rules that indicate conflict avoidance descriptions;

- complementary rule generation means for generating complementary rules that indicate
10 complementary conflict avoidance descriptions on the basis of the conflict process rules stored in said storage means; and

- update means for updating the input setup data in accordance with the conflict process rules and the
15 complementary rules.

2. The apparatus according to claim 1, wherein when said storage means stores a plurality of conflict process rules for one state of one function of the object to be controlled having two states, and does not
20 store any conflict process rule for the other state, said complementary rule generation means generates inverse logic of the conflict process rules for the one state as complementary rules to conflict process rules for the other state.

- 25 3. The apparatus according to claim 1, wherein said storage means stores the conflict process rules as a conflict process rule description file.

predetermined object to be controlled, which are input via a user interface, comprising:

the complementary rule generation step of referring to a conflict process rule description file that describes conflict process rules that indicate conflict avoidance descriptions, and generating complementary rules that indicate complementary conflict avoidance descriptions on the basis of the conflict process rules; and

the update step of updating the input setup data in accordance with the conflict process rules and the complementary rules.

11. The method according to claim 10, wherein the complementary rule generation step includes the step of generating, when the conflict process rule description file describes a plurality of conflict process rules for one state of one function of the object to be controlled having two states, and does not describe any conflict process rule for the other state, inverse logic of the conflict process rules for the one state as complementary rules to conflict process rules for the other state.

12. The method according to claim 10, wherein the conflict process rule description file is described in accordance with a predetermined markup language.

13. The method according to claim 12, wherein the conflict process rule description file describes local

rules which can be applied to only a specific object to
be controlled, and a universal rule description file
that describes universal rules which can be commonly
applied to a plurality of objects to be controlled is
5 externally referred to.

14. The method according to claim 10, wherein the
conflict process rule description file contains a
description of an update command of the user interface.

15. The method according to claim 10, wherein the
10 complementary rule generation step further comprises
the step of additionally writing the generated
complementary rules in the conflict process rule
description file.

16. The method according to claim 10, further
15 comprising the step of informing that the setup data
have been updated upon applying the conflict process
rules or the complementary rules in the update step.

17. A program for making a computer implement a user
interface control method for avoiding a conflict that
20 occurs between setup data for a predetermined object to
be controlled, which are input via a user interface,
comprising:

a program code of the complementary rule
generation step of referring to a conflict process rule
description file that describes conflict process rules
25 that indicate conflict avoidance descriptions, and
generating complementary rules that indicate

complementary conflict avoidance descriptions on the basis of the conflict process rules; and

a program code of the update step of updating the input setup data in accordance with the conflict process rules and the complementary rules.

18. The program according to claim 17, wherein the program code of the complementary rule generation step includes the step of generating, when the conflict process rule description file describes a plurality of conflict process rules for one state of one function of the object to be controlled having two states, and does not describe any conflict process rule for the other state, inverse logic of the conflict process rules for the one state as complementary rules to conflict process rules for the other state.

19. The program according to claim 17, wherein the conflict process rule description file is described in accordance with a predetermined markup language.

20. The program according to claim 19, wherein the conflict process rule description file describes local rules which can be applied to only a specific object to be controlled, and a universal rule description file that describes universal rules which can be commonly applied to a plurality of objects to be controlled is externally referred to.

21. The program according to claim 17, wherein the conflict process rule description file contains a description of an update command of the user interface.

22. The program according to claim 17, wherein the
5 program code of the complementary rule generation step further comprises a program code of the step of additionally writing the generated complementary rules in the conflict process rule description file.

23. The program according to claim 17, further
10 comprising a program code of the step of informing that the setup data have been updated upon applying the conflict process rules or the complementary rules in the update step.

24. A storage medium that stores a program for making
15 a computer implement a user interface control method for avoiding a conflict that occurs between setup data for a predetermined object to be controlled, which are input via a user interface, storing:

a conflict process rule description file that
20 describes conflict process rules that indicate conflict avoidance descriptions;

a program code of the complementary rule
generation step of referring to the conflict process
rule description file, and generating complementary
25 rules that indicate complementary conflict avoidance
descriptions on the basis of the conflict process
rules; and

0995724-112901

a program code of the update step of updating the input setup data in accordance with the conflict process rules and the complementary rules.

25. An information processing apparatus comprising:

5 means for executing a basic process for matching setup conditions with each other;

generation means for generating complementary process rules that complement the basic process so as to match the setup conditions; and

10 control means for matching the setup conditions in accordance with the basis process and complementary process rules, and determining control parameters based on the conditions.

26. The apparatus according to claim 25, wherein said
15 control means determines the presence/absence of a conflict between setup conditions, which are input from input means for inputting the setup conditions, and applies the basic process and the complementary process rules to determine control parameters if any conflict
20 is detected.

27. The apparatus according to claim 25, further comprising:

interface means for visualizing the setup conditions; and

25 display control means for displaying the conditions determined by said control means on said interface means.

presence/absence of a conflict between setup conditions,
which are input from the input step of inputting the
setup conditions, and applying the basic process and
the complementary process rules to determine control
5 parameters if any conflict is detected.

33. The method according to claim 31, further
comprising:

the interface step of visualizing the setup
conditions; and

10 the display control step of displaying the
conditions determined by the control step in the
interface step.

34. The method according to claim 33, wherein the
display control step includes the step of informing
15 that the setup conditions have been changed upon
applying the basic process and the complementary
process rules by the control step.

35. A program for making a computer implement an
information processing method, comprising:

20 a module for executing a basic process for
matching setup conditions with each other;

a generation module for generating complementary
process rules that complement the basic process so as
to match the setup conditions; and

25 a control module for matching the setup
conditions in accordance with the basis process and

complementary process rules, and determining control parameters based on the conditions.

36. The program according to claim 35, wherein said control modules determines the presence/absence of a conflict between setup conditions, which are input from an input module for inputting the setup conditions, and applies the basic process and the complementary process rules to determine control parameters if any conflict is detected.

37. The program according to claim 35, further comprising:

an interface module for visualizing the setup conditions; and

a display control module for displaying the conditions determined by said control module in said interface module.

38. The program according to claim 37, wherein said display control module informs that the setup conditions have been changed upon applying the basic process and the complementary process rules by said control module.

39. A computer readable storage medium that stores a program module used to make a computer implement an information processing method, said program module comprising:

a module for executing a basic process for matching setup conditions with each other;

a generation module for generating complementary process rules that complement the basic process so as to match the setup conditions; and

a control module for matching the setup
5 conditions in accordance with the basis process and complementary process rules, and determining control parameters based on the conditions.

40. A user interface control apparatus for avoiding a conflict that occurs due to setup information, which is
10 input via a user interface that can input setup information for a predetermined object to be controlled, comprising:

storage means for storing conflict process rules indicating conflict avoidance strategies; and

15 update means for updating related setup information by applying the conflict process rules on the basis of the input setup information,

said update means comprising:

detection means for detecting setup information
20 to be changed by applying the conflict process rules; and

setup information change means for changing only the detected setup information.

41. The apparatus according to claim 40, further
25 comprising informing means for informing that the setup information has been changed by said setup information change means.

46. A program for making a computer implement a user interface control method for avoiding a conflict that occurs due to setup information, which is input via a user interface that can input setup information for a predetermined object to be controlled, comprising:

a program code of the detection step of referring to a conflict process rule description file that describes conflict process rules indicating conflict avoidance strategies, and detecting setup information to be changed by applying the conflict process rules; and

a program code of the setup information change step of changing only the detected setup information.

47. The program according to claim 46, further comprising a program code of the informing step of informing that the setup information has been changed in the setup information change step.

48. A storage medium that stores a program for making a computer implement a user interface control method for avoiding a conflict that occurs due to setup information, which is input via a user interface that can input setup information for a predetermined object to be controlled, storing:

a program code of the detection step of referring to a conflict process rule description file that describes conflict process rules indicating conflict avoidance strategies, and detecting setup information

to be changed by applying the conflict process rules;
and

a program code of the setup information change
step of changing only the detected setup information.

0995724.112901